Appendix G

MITIGATION

INTRODUCTION

A summary of mitigation measures by resource is presented in Table G-1: Summary of Mitigation Measures for all Action Alternatives. Each mitigation measure is discussed in greater detail below.

MITIGATION FOR GEOLOGIC RESOURCES

Alternative A (Proposed Action)

Because construction practices already include attempting to remove cable by plowing or pulling before trenching and the use of trench plugs, the Proposed Action includes adequate measures to reduce erosion on steep slopes. Therefore, no additional mitigation is required.

Although the potential to disturb significant paleontological resources is low, the following mitigation is required, if significant resources are uncovered during construction:

> If significant fossils are encountered during removal or rehabilitation actions, AT&T would consult with the appropriate land agency (NPS or BLM) prior to continuing actions in the affected area.

Alternative B

Same as the Proposed Action.

Alternative C

Same as the Proposed Action.

MITIGATION FOR SOIL RESOURCES

Alternative A (Proposed Action)

> To reduce erosion and the loss of soil productivity, the following measures are required:
>
> The right of way mitigation measures for vegetation impacts.
>
> Construction erosion controls would be placed on disturbed wash banks when rain-related erosion is imminent.
>
> No ripping of the access corridor within the Soda Lake playa would be conducted.
>
> If off-site fill is necessary for huts/vaults, fill would only be taken from agency- approved sources.

Alternative B

Same as the Proposed Action.

Alternative C

Same as the Proposed Action.

MITIGATION FOR AIR QUALITY

Alternative A (Proposed Action)

The following mitigation measures are required to avoid or reduce air quality impacts and would be incorporated into dust control plans for submission to the MDAQMD and KCAPCD. These measures would also be incorporated into the dust permit application to the Clark County Health Department as stated below:

Define routes of travel for passenger vehicles, delivery trucks, and construction vehicles to the work site that will reduce travel on unpaved roads as much as possible. These routes of travel would be specifically identified in the dust control plans submitted to the air control districts. If the routes of travel result in more unpaved road travel than is calculated in Appendix D, additional mitigation may be necessary.

Workers would be required to commute together to the construction sites as much as possible.

Open-bodied trucks transporting materials that could become airborne would be covered when the trucks are in motion.

All dirt generated during removal actions on the right of way and access corridor would remain in place. No soil or dirt would be exported from the right of way or the access corridor.

Construction-related soil that could become airborne from paved roads would be promptly removed.

Any additional mitigation measures required by the affected air pollution control districts would be incorporated into the dust control plan(s).

The pre-construction education program would include information on project-related air quality impacts and mitigation.

Alternative B

Same as in the Proposed Action.

Alternative C

Same as in the Proposed Action.

MITIGATION FOR NOISE

Alternative A (Proposed Action)

The Proposed Action already includes construction practices that should limit noise, such as limiting operations to daylight hours without specific authorization, maintenance of noise-abatement equipment, and use of proper equipment operating techniques. The projection of impacts is based on conservative assumptions that may overstate the actual noise impacts. No additional mitigation is required.

Alternative B

Same as Proposed Action.

Alternative C

Same as Proposed Action.

MITIGATION FOR WATER RESOURCES

Alternative A (Proposed Action)

AT&T is required by applicable regulations to obtain or prepare the following permits and plans:

A U.S. Army Corps of Engineers (USACE) Nationwide Permit 12 (Utility Line Backfill and Bedding);

A Stream Alteration Agreement from the California Department of Fish and Game (CDFG);

A Storm Water Pollution Prevention Plan (SWPP Plan) that meets EPA's National Storm Water Program General Permit requirements.

In addition, the following measures are required to avoid or reduce impacts to surface water resources:

The soil mitigation measures noted for soil resources.

The permits and plans noted above would be filed with NPS and kept on site with the removal contractor.

Contours of wash banks would be restored to their preremoval condition, as necessary.

Appropriate construction erosion measures would be used to reduce erosion into the wash if rain and related erosion are a concern at the time of removal.

No ripping would be conducted on the access corridor on the Soda Lake open playa.

Alternative B

Same as the Proposed Action.

Alternative C

Same as the Proposed Action.

MITIGATION FOR VEGETATION

Alternative A

To reduce the impacts of the Proposed Action on vegetative communities, the following mitigation measures are required:

No blading or grading of the right of way would occur prior to cable removal to minimize vegetation disturbance.

To prevent the spread of exotic plant species, all construction equipment would be washed once prior to initial site entry.

All equipment would be washed between the areas east and west of Barstow and east and west of U.S. 395. If removal proceeds from east to west across U.S. 395, then equipment washdown would not be required.

Plant or gravel mulch would be from local on-site sources only. Crushed vegetation from the right of way or vegetation dislodged by berm removal are on-site sources of plant mulch. Gravel disturbed by the original installation or cable removal is an on-site source of gravel. No imported plant mulch would be used.

When trenching, soils would not be placed on existing vegetation.

The following mitigation measures are required for all areas where the cable is to be removed and the easement is to be relinquished:

Contouring After Plowing - Following removal of the cable, the cable furrow would be graded to approximate natural contours.

Replanting of Large Species of Vegetation - Joshua trees, yuccas, and cacti along the right of way would be avoided or removed prior to construction, and replanted their original directional orientation.

Dry Washes - Surface disturbance would be contoured to match preremoval conditions. Existing erosion control measures (such as riprap, gabions, sandbags, etc.) would not be removed to reduce soil and vegetation disturbance.

Mulching - Except for large species of vegetation (see above), no vegetation would be removed prior to cable removal activities; remaining crushed vegetation will be used as a seed source and to stabilize soils.

Access Control - Minimal disruption of existing vegetation would assist in discouraging the use of the right of way. Access control measures such as vertical mulch, posts, locally available boulders, and Joshua trees would be used at three locations (MP 6044 - MP6046, MP6113 - MP6130, and MP 7485 - MP7487) where the access corridor and cable right of way diverge. These measures would be placed at the points where the access corridor and cable right of way diverge to discourage vehicle use of the disturbed right of way prior to revegetation.

The following mitigation measure is required for rehabilitation:

Large Plant Species - If large plant species such as Joshua trees, cactus, and yuccas are encountered in the area to be disturbed by rehabilitation, they would be transplanted prior to disturbance and replanted at their original location. The directional orientation of each plant recovered would be documented so that the plant can be replanted in the same orientation.

Alternative B

Same as Proposed Action.

Alternative C

Same as Proposed Action.

MITIGATION FOR COMMON WILDLIFE

Alternative A (Proposed Action)

The following mitigation measures are required to educate workers about the sensitivity of desert wildlife, reduce the area of disturbance within the right of way, encourage reestablishment of habitat, and avoid or reduce direct mortality.

Preconstruction Educational Program — The preconstruction education program would include information on common species expected to be encountered, and construction practices that would be used to minimize adverse affects.

Predisturbance Habitat Monitoring — Immediately prior to ground disturbance, biological monitors would examine removal and rehabilitation areas to identify any common species in the path of disturbance. Identified animals would be allowed to escape or be carefully relocated out of the path of disturbance.

Mammal Den Monitoring — Surveys would be conducted prior to removal and rehabilitation activities to locate active large mammal dens (such as coyote) and owl burrows. If active dens or burrows are identified either within the right of way or immediately adjacent to the right of way, avoidance will be considered. If avoidance is not possible, animals would be allowed to escape or be carefully removed before work continues at that location.

Trapped Animals — All open holes would be inspected at the beginning of the day, middle of the day, and end of the day. If animals are trapped, the biological monitor would be notified immediately. The animals would be allowed to escape or would be carefully removed before work continues in that location.

Trench Closure — To the extent practicable, trenches would not be left open overnight. If a trench must be left open overnight, it would be covered and barricaded.

Vault Closure — Any vaults left open during the demolition of repeater huts and manholes would be barricaded overnight.

Equipment would not be staged, if possible, at any of three locations where the project route crosses known or probable bighorn sheep corridors.

Alternative B

Same as the Proposed Action.

Alternative C

Same as the Proposed Action.

MITIGATION FOR SPECIES OF CONCERN

Alternative A (Proposed Action)

Mitigation for Plant Species of Concern — The following mitigation measures are required for plant species of concern:

Species of concern identified by initial surveys or preremoval monitoring within the path of disturbance would be flagged and avoided if possible.

Biological Monitors — Several areas identified as actual or potential habitat for plant species of concern would be monitored prior to any physical disturbance to minimize adverse affects on sensitive plant species. These areas include the sand dunes near Aerial Acres (for desert cymopterus), several locations in Round Valley on the east side of the Mid-Hills (for Cima milk-vetch and purple bird's beak), the western end of Cronese Valley (for sand linanthus and Small-flowered androstephium), and several locations between the Waterman Hills and Water Valley (for Mojave indigo bush).

Mitigation for Animal Species of Concern — The following mitigation measures are required for adverse affects to animal species of concern:

Preconstruction

Preconstruction Educational Program — All persons associated with construction would participate in an educational program covering basic sensitive animal species identification and environmental management practices.

Predisturbance Habitat Monitoring — Immediately prior to ground disturbance, biological monitors would examine removal areas to identify occupied habitats for the desert tortoise, the Mojave ground squirrel, and the burrowing owl to determine the potential for relocation.

Tortoise Burrow Monitoring — Within designated tortoise habitat, the construction area would be surveyed no more than 24 hours prior to removal and rehabilitation activities. If tortoises or burrows are found within the right of way or along segments of the access corridor to be rehabilitated, the biologist would consult with the construction supervisor to determine the necessary course of action. Surveys would include an area at least 30 feet from either edge of the right of way or access corridor rehabilitation segments because tortoise burrows can extend to this length.

Construction

Daily Employee Tortoise Surveys — Because tortoises may seek shade underneath construction equipment or vehicles, all on-site employees would be responsible for surveying under parked vehicles prior to moving them. An authorized biologist would be contacted to remove any tortoises found before vehicles are moved.

Tortoise Handling — Tortoises would only be handled by an authorized biologist. The tortoise would be kept upright at all times and handled gently to reduce the potential for voiding of the bladder. Tortoises found within 3 hours of nightfall or when ambient air temperature is above 90 degrees, would be placed in a clean cardboard box, covered, and kept overnight by the biologist. The tortoise would be relocated the next morning, as discussed below. Any gloves or cardboard used to transport tortoises would be used only once and immediately discarded to reduce the potential for transmission of disease.

Tortoise Relocation — Any tortoises on the right of way or along segments of the access corridor to be rehabilitated would be relocated to a distance not less than 300 feet from the right of way or access corridor in a direction of undisturbed land. All excavation of tortoise burrows would be done by hand, either by the authorized biologist or under his or her direction. The tortoise would be placed in a burrow of appropriate size or in a shady location under a large shrub. (If relocation occurs during the normal dormant period of the tortoise, the tortoise would be moved and placed only in a burrow.) If no burrows are available for relocating the tortoises, artificial burrows would be used.

Injured Tortoises — Any dead, injured, or sick tortoises would be reported to USFWS within 3 business days. Approved veterinary care centers would be identified prior to initiation of construction. The authorized biologist would be responsible for transporting any sick or injured tortoise to the nearest care center.

Trapped Animals — All open holes would be inspected for trapped animals at the beginning of the day, the middle of the day, and at end of the day. If animals are trapped, the biological monitor would be notified immediately. The animals would be allowed to escape or would be carefully removed before work continues in that location. Only the authorized biologist would be permitted to handle species of concern.

Trench Closure — To the extent practicable, trenches would not be left open overnight. If a trench must be left open overnight, it would be covered and barricaded.

Vault Closure — Any vaults left open during the demolition of repeater huts and manholes would be barricaded overnight.

Record-Keeping and Reporting — The project biologist would maintain a daily log to record all species of concern encountered. When the project is completed, a report would be forwarded to appropriate agencies, detailing the locations of each occurrence, the general

condition and health of each individual (for tortoises, also if they voided their bladder), diagnostic markings, and any actions undertaken.

Compensation for Desert Tortoise Habitat Loss Due to Cable Removal

AT&T would provide off-site compensation for unavoidable impact to desert tortoise habitat in the areas of cable removal based on the designated habitat category and acreages affected. Because habitat for the Mojave ground squirrel coincides with desert tortoise habitat, compensation acreage would address loss of habitat for both species. No off-site compensation is proposed for short-term construction impacts at repeater hut sites or the access corridor because the original disturbance of these areas is not part of the Proposed Action, and these areas do not presently provide desert tortoise habitat.

Compensation for desert tortoise habitat would be based on BLM-designated categories for areas within the CDCA, USFWS-designated critical habitat within the Mojave National Preserve, and USFWS-designated critical habitat and additional BLM guidance in Nevada (BLM 1988, 1993; USFWS 1994; Cole 1997). BLM guidance provides a method for calculating compensation ratios for affected habitat. USFWS did not provide similar guidance in the Recovery Plan for the desert tortoise. An examination of the location of critical habitat units in the Mojave National Preserve indicates a strong correlation with previously BLM-designated category I habitat. Similarly, the critical habitat unit affected by cable removal in Nevada is located adjacent to category I habitat across the border in California. Thus, compensation ratios for affected critical habitat is based on those ratios used for BLM category I habitat.

Based on the BLM guidance, compensation ratios were calculated for each of the BLM categories of desert tortoise habitat (BLM 1988). The formula used takes into account the habitat category, impacts to adjacent land, growth inducement resulting from a project, existing disturbance, and the duration of effects. The guidance and the calculation of specific compensation ratios for this project are shown in Table G-2; Determination of Compensation Ratios for BLM-Designated Desert Tortoise Category Habitat.

BLM's designation of category habitat included only public lands. For this project, private and state lands within the boundaries of category habitat are also considered category habitat for the purposes of compensation. Critical habitat was designated for both private and federal lands. Compensation lands for impacts to desert tortoise habitat on private land or state land within the CDCA boundaries would be provided to the BLM, and compensation for impacts to private land within the Mojave National Preserve would be provided to the NPS. Compensation for impacts to tortoise habitat on federal land in Nevada would be provided to the BLM.

Cable would be removed from 50.8 miles of category I habitat and 30.0 miles of category III habitat in the CDCA. Based on a worst-case scenario that removal activities would require disturbance of the entire 20-foot right of way, 123.3 acres of category I habitat and 72.7 acres of category III habitat would be affected. Using a compensation ratio for category I habitat of 3:1, and a compensation ratio for category III habitat of 1:1, an estimated 442.5 acres of land would be provided as compensation for impacts to desert tortoise from the Proposed Action in the CDCA.

Cable would be removed from 28.8 miles of USFWS-critical habitat in the Mojave National Preserve. Based on a 20-foot assumed area of disturbance, 69.8 acres of critical habitat would be affected. Using the 3:1 ratio calculated above for BLM Category I habitat, an estimated 209.4 acres of land would be provided as compensation for impacts to desert tortoise from the Proposed Action in the Mojave National Preserve.

Cable would be removed from 0.6 mile of critical habitat and 1.1 miles of potential habitat (below 4,500 feet) in Nevada (Cole 1997). Based on a 20-foot area of disturbance along the cable right of way, removal would affect 1.4 acres of critical habitat and 2.7 acres of potential habitat. Using a 3:1 compensation ratio for the critical habitat and a 1:1 ratio for the potential habitat, compensation would be provided for 7.0 acres of tortoise habitat in Nevada.

In all affected habitat areas in Nevada and California, 659 acres of desert tortoise habitat compensation would be provided for the long-term impacts of cable removal. This compensation would also compensate for impacts to Mojave ground squirrel habitat in California because of cable removal.

Alternative B

Mitigation measures for plant species of concern would be the same as in the Proposed Action.

Mitigation measures for animal species of concern would be the same as in the Proposed Action for preconstruction and construction actions.

Compensation for impacts to desert tortoise habitat would be different than in the Proposed Action. Using the same methodology noted above for compensation, this alternative would affect 53.3 acres of category I habitat and 72.7 acres of category III habitat in the CDCA. Using a compensation ratio for category I habitat of 3:1, and a compensation ratio for category III habitat of 1:1, an estimated 232.5 acres of land would be provided as compensation for impacts to desert tortoise on public and private lands in the CDCA.

Cable would be removed from 0.4 acre of USFWS-critical habitat on private land within the Mojave National Preserve boundaries (but not part of the Preserve). Using the 3:1 ratio calculated above for BLM category I habitat, an estimated 1.2 acres of land would be provided as compensation for impacts to desert tortoise on private lands in the Mojave National Preserve.

Cable removal would affect 2.7 acres of potential habitat (below 4,500 feet) in Nevada (Cole 1997). Using a 1:1 ratio for the potential habitat, compensation would be provided for 2.7 acres of tortoise habitat in Nevada.

In all affected habitat areas in Nevada and California, 236 acres of desert tortoise habitat compensation would be provided for the long-term impacts of cable removal. This compensation would also compensate for impacts to Mojave ground squirrel habitat in California due to cable removal.

Alternative C

Mitigation measures for plant species of concern would be the same as the Proposed Action.

Mitigation measures for animal species of concern would be the same as the Proposed Action for preconstruction and construction actions.

Compensation for impacts to desert tortoise habitat would be different than the Proposed Action. Using the same methodology noted for compensation, this alternative would affect 53.3 acres of category I habitat and 52.8 acres of category III habitat in the CDCA. Using a compensation ratio for category I habitat of 3:1, and a compensation ratio for Category III habitat of 1:1, an estimated 213.8 acres of land would be provided as compensation for impacts to desert tortoise on private and state lands in the CDCA.

Cable would be removed from 0.4 acres of USFWS-critical habitat on private land within the Mojave National Preserve boundaries (but not part of the Preserve). Using the 3:1 ratio calculated above for BLM Category I habitat, an estimated 1.2 acres of land would be provided as compensation for impacts to desert tortoise on private lands in the Mojave National Preserve.

Cable removal would not be removed from critical or potential habitat for the tortoise in Nevada.

In all affected habitat areas, 215 acres of desert tortoise habitat compensation would be provided for the long-term impacts of cable removal. This compensation would also compensate for impacts to Mojave ground squirrel habitat due to cable removal.

MITIGATION FOR CULTURAL RESOURCES

Alternative A (Proposed Action)

The following required mitigation measures are based on the significance of the resource that may be adversely affected, and the extent of existing disturbance.

Preconstruction Educational Program — The preconstruction program would include an educational program to discuss the potential for cultural resources to occur along the route, measures to be taken to avoid or minimize disturbance, and the appropriate agencies to contact if undocumented cultural resources are discovered.

Avoidance or monitoring is required for potentially eligible cultural resources located within the APE. For potentially eligible resources located outside of the APE and non-potentially eligible resources, AT&T would minimize disturbance to these resources by staying within the right of way during construction activities. Mitigation measures for each site are listed in Table G-3; Mitigation for Archeological Sites Potentially Affected by Action Alternatives.

In New Mexico, if vehicle traffic crosses any of the five identified sites, an archaeological monitor would be present to flag site boundaries and monitor the movement of equipment over the site; no monitors would be required if vehicle traffic is prohibited across these sites.

In California and Nevada, an archaeological monitor would be present to observe cable removal activities within the recorded site areas to ensure that significant discoveries, if uncovered, can be evaluated. Also, the monitor would ensure that construction activities do not disturb presently undisturbed portions of the resource outside of the right of way or access corridor.

Alternative B

Mitigation would be the same as the Proposed Action.

Alternative C

Mitigation would be the same as the Proposed Action.

MITIGATION FOR LAND USE AND RECREATION

Alternative A (Proposed Action)

To reduce land use impacts, the following mitigation measures are required:

When removal is unavoidable, AT&T would replace any affected improvements (i.e., fencing) removed during construction.

Noise impacts would be mitigated by the measures noted in the Noise section.

A dust control plan as noted in the Air Quality section.

Vegetation measures noted for Vegetation.

Where the Mojave Road is disturbed by cable removal, the road would be restored to its preremoval condition including the replacement of any disturbed cairns. Access along the Mojave Road would remain open.

Any additional measures from the NPS minimal tool determination process for the removal and rehabilitation actions proposed for wilderness areas in the Mojave National Preserve.

Alternative B

Mitigation would be the same as in Proposed Action.

Alternative C

Mitigation would be the same as in Proposed Action.

MITIGATION FOR TRANSPORTATION AND UTILITY CORRIDORS

Alternative A (Proposed Action)

The Proposed Action includes construction practices to reduce or avoid transportation-related impacts. No additional mitigation measures required.

Alternative B

Same as in the Proposed Action.

Alternative C

Same as the Proposed Action.

MITIGATION FOR VISUAL AESTHETICS

Alternative A (Proposed Action)

The following mitigation measures are required to reduce visual adverse affects:

A dust control plan would be developed as noted in the Air Quality section to reduce temporary visual impacts related to dust.

Revegetation along the cable right of way would be implemented by the mitigation measures listed for vegetation impacts.

Gravel mulch would only be used for mitigation or rehabilitation where visually appropriate.

Joshua trees and boulders would only be used for access control where visually appropriate.

Any additional measures from the NPS minimal tool determination process for the removal and rehabilitation actions proposed for wilderness areas in the Mojave National Preserve.

Alternative B

Same as in the Proposed Action.

Alternative C

Same as in the Proposed Action.

MITIGATION FOR HAZARDOUS MATERIALS AND SAFETY

Alternative A (Proposed Action)

The proposed action includes practices and plans that would address hazardous material and safety issues, and no additional mitigation measures are required.

Alternative B

Same as the Proposed Action.

Alternative C

Same as the Proposed Action.

MITIGATION FOR SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Alternative A (Proposed Action)

The following mitigation measure is required to reduce socioeconomic impacts:

Construction workers would not be lodged in any available rental housing in Baker, and would not cause the motel occupancy rate to exceed 95 percent.

Alternative B

Same as the Proposed Action.

Alternative C

Same as the Proposed Action.